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APPLICATION

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FOR UNITED STATES LETTERS PATENT

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SPECIFICATION

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TO ALL WHOM IT MAY CONCERN:

BE IT KNOWN THAT I, JOHANNES CORNELIUS N. BOSCH, a
25 citizen of SOUTH AFRICA, have invented a new and useful PLUG
ASSEMBLY of which the following is a specification:

PLUG ASSEMBLY

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BACKGROUND OF THE INVENTION

Field of the Invention

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The present invention relates to plug devices and more particularly pertains to a new plug device which prevents accidental removal of the plug from an electrical socket.

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Description of the Prior Art

The use of plug devices is known in the prior art. U.S. Patent No. 6,234,823 describes a device for securing a male plug to a plug adapter to allowing 120 volt plug to be connected to alternate power supplies.

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Another power supply plug is found in U.S. Pat. No. 5,921,799 which describes a locking mechanism for a power plug.

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While these devices fulfill their respective, particular objectives and requirements, the need remains for a device that prevents a power cord from being too easily removed from a power socket and also allows for multiple outlets from one socket.

SUMMARY OF THE INVENTION

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The present invention meets the needs presented above by including a power adapter that is conventionally coupled to a socket but couples to

power cords in such a manner that the power cords extend laterally away from the adapter. In this way, when an appliance such as a vacuum cleaner, or other device, is plugged into the power adapted, the power cord is not removed from the adapter when tension is placed on it. Also, the power adapter itself is not pulled out easily from the socket by the power cords because pulling on the power cords places lateral force on the power adapter as opposed to the power adapted being pulled outwardly away from the socket as happens with conventional adapters.

To this end, the present invention generally comprises a plug adapter including a front side, a back side, a top side, a bottom side, a first lateral side and a second lateral side. The back side has a pair of slots therein. Each of the slots is adjacent to and extends along one of the first and second lateral sides such that flanges are defined between the slots and an adjacent one of the first and second lateral sides. A pair of male plugs is attached to and extends away from the front side. Each of a plurality of cords has a female plug coupler electrically attached thereto and adapted for selectively coupling with one of the flanges such that the cords extend laterally away from the plug adapter. A plurality of electrical contacts is mounted in the slot and on the female plug couplers for electrically coupling the female plug couplers to the plug adapter. The electrical contacts in the slots are electrically coupled to an associated one of the male plugs.

There has thus been outlined, rather broadly, the more important features of the invention in order that the detailed description thereof that follows may be better understood, and in order that the present contribution to the art may be better appreciated. There are additional features of the invention that will be described hereinafter and which will form the subject matter of the claims appended hereto.

The objects of the invention, along with the various features of novelty which characterize the invention, are pointed out with particularity in the claims annexed to and forming a part of this disclosure.

5 **BRIEF DESCRIPTION OF THE DRAWINGS**

The invention will be better understood and objects other than those set forth above will become apparent when consideration is given to the following detailed description thereof. Such description makes reference
10 to the annexed drawings wherein:

Figure 1 is a schematic perspective view of a plug assembly according to the present invention.

15 Figure 2 is a schematic back side view of the present invention.

Figure 3 is a schematic left view of the present invention.

Figure 4 is a schematic top view of the present invention.

20 Figure 5 is a schematic right side view of the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENT

25 With reference now to the drawings, and in particular to Figures 1 through 5 thereof, a new plug device embodying the principles and concepts of the present invention and generally designated by the reference numeral 10 will be described.

30 As best illustrated in Figures 1 through 5, the plug assembly 10 generally includes a plug adapter 12 with a front side 14, a back side 16, a top side 18, a bottom side 20, a first lateral side 22 and a second lateral side 24. The back side 16 has a pair of slots 26 therein. Each of the slots 26 is adjacent to and extends along one of the first 22 and second 24

lateral sides such that flanges 30 are defined between the slots 26 and an adjacent one of the first 22 and second 24 lateral sides. The back side 16 has a plurality of apertures 32 therein each defining a female plugs. A plurality of male plugs 34 is attached to and extends away from the front side. Each of the male plugs 34 is electrically coupled to an associated one of the female plugs 32. Ideally, there are two current transferring male and female plugs and one grounding male 35 and female plug. The male plugs 34 are located for positioning in a conventional socket and the apertures 32 are positioned for receiving the male plugs of a conventional electrical cord.

Each of a plurality of cords 36 each has a female plug coupler 38 electrically attached thereto adapted for selectively coupling with one of the flanges 30 such that the cords 36 extend laterally away from the plug adapter 12. The cords 36 may have a second end, not shown, that is electrically coupled to an electrically powered device or a conventional female plug such that cord 36 is used as an extension cord. The plug couplers 38 each include a first panel 40 and a second panel 42 that are attached together along an edge by a central portion 44 such that a cavity 46 is defined between the first 40 and second 42 panels. The cavity 46 has a size and shape adapted for receiving one of the flanges 30 such that the first panel 40 is positioned within the slot 26. The central portion 44 is substantially flush with the back side 16 of the plug adapter 12 when the flange 30 is positioned within the cavity 46. An attached one of the plurality of cords 36 extends away from the second panel 42. Ideally, an outer surface of the second panel 42 is arcuate shaped.

Each of a plurality of electrical contacts 50, 51, 52, 53 is utilized for electrically coupling the female plug couplers to the plug adapter. The electrical contacts are each mounted in one of the slots 26 and the cavities

46 such that each of the slots 26 have a pair of electrical contacts 50, 51 therein and each of the first panels 40 has a pair of electrical contacts 52, 53 therein. Each of the electrical contacts 50, 51 in the slots 26 is electrically coupled to one of the male plugs 34 used for conducting
5 electricity. The electrical contacts 50, 51 in the slots 26 are mounted on the flanges 30. The electrical contacts 52, 53 in the cavities 46 are mounted on the first panels 40 and face the flanges 30. The electrical contacts 52, 53 on the first panels 40 and each is positioned for engaging an associated one of the electrical contacts 50, 51 in the slots 26.

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In use, the plug adapter 12 and female plug couplers 38 are used in a conventional manner as a typical power supply. The female plug couplers 38 are attached to the flange 30 as depicted in Figures 1 and 4 so that the electrical contacts 52, 53 on the female plug couplers 38 are in electrical
15 connection with the male plugs 34. Conventional plugs may be inserted into the apertures 32 to increase the usage of the assembly 10.

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With respect to the above description then, it is to be realized that the optimum dimensional relationships for the parts of the invention, to include variations in size, materials, shape, form, function and manner of operation, assembly and use, are deemed readily apparent and obvious to one skilled in the art, and all equivalent relationships to those illustrated in the drawings and described in the specification are intended to be encompassed by the present invention.

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Therefore, the foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and
30 described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.